Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-14-012;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engines and emission control systems produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2016	GJDXL13.5300	13.5	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Charge Air Cooler, Oxidation Catalyst, Electronic Direct Injection, Electronic Control Module, Exhaust Gas Recirculation, Periodic Trap Oxidizer, Turbocharger, Selective Catalytic Reduction-Urea, Ammonia Oxidation Catalyst	Crane, Tractor, Loaders, Dozer, Pump, Compressor, Generator Set, Other Industrial Equipment

The engine models and codes are attached.

The following are the exhaust certification standards (STD), or family emission limit(s) (FEL) as applicable, and certification levels (CERT) for hydrocarbon (HC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			NMHC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
130 ≤ kW ≤ 560	Tier 4 Final	STD	0.19	0.40	N/A	3.5	0.02	N/A	N/A	N/A
		FEL	--	0.36	--	--	0.01	--	--	--
		CERT	0.03	0.06	--	0.03	0.003	--	--	--

BE IT FURTHER RESOLVED: That the family emission limit(s) (FEL) is an emission level declared by the manufacturer for use in any averaging, banking and trading program and in lieu of an emission standard for certification. It serves as the applicable emission standard for determining compliance of any engine within this engine family under 13 CCR Sections 2423 and 2427.

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

BE IT FURTHER RESOLVED: That the manufacturer has elected to include engine models in this engine family which are identified for "emergency vehicle use only". These "emergency vehicle use only" engines are exempt from requirements imposed pursuant to California law and the regulations adopted pursuant thereto for motor vehicle pollution control devices per California Vehicle Code Section 27156.2. The manufacturer must clearly label these engines for "emergency vehicle use only" on the engines' emission control label.

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

This Executive Order hereby supersedes Executive Order A-004-0520 dated December 22, 2015.

Executed at El Monte, California on this 16 day of December 2016.

Annette Hebert, Chief
Emissions Compliance, Automotive Regulations and Science Division

R/C 12/9/2016

Attachment: Page 1 of 1

EO#: 4-R-004-0520-1

Engine Model Summary Form

Manufacturer: John Deere Power Systems
Engine category: Nonroad CI
EPA Engine Family: GJDXL13.5300
Mfr Family Name: 650HCA
Process Code: Running Change

1. Engine code	2. Engine Model	3. kW@RPM (SAE Gross)	4. Fuel Rate: mm/stroke@peak kW (for diesel only)	5. Fuel Rate: (kg/hr)@peak kW (for diesels only)	6. Torque (Nm) @RPM (SEA Gross)	7. Fuel Rate: mm/stroke@peak torque	8. Fuel Rate: (kW/hr)@peak torque	9. Emission Control Device Per SAE J1930
6135HDW11	6135	296@2000	205.8@2000	62.9@2000	2099@1500	290.2@1500	66.5@1500	EGR ECM PTOX OC SCRC NH3OC DFI TC CAC
6135HDW12	6135	460@2100	320.1@2100	102.8@2100	2750@1550	389@1550	92.2@1550	EGR ECM PTOX OC SCRC NH3OC DFI TC CAC
* 6135HDW16	6135	296@2000	205.8@2000	62.9@2000	2099@1500	290.2@1500	66.5@1500	EGR ECM PTOX OC SCRC NH3OC DFI TC CAC
6135HFC09A	6135	448@2100	314.3@2100	100.9@2100	2750@1550	395@1550	93.5@1550	EGR ECM PTOX OC SCRC NH3OC DFI TC CAC
6135HFC09B	6135	410@2100	277.2@2100	89@2100	2640@1550	370.5@1550	87.8@1550	EGR ECM PTOX OC SCRC NH3OC DFI TC CAC
6135HFC09C	6135	410@2100	278.1@2100	89.3@2100	2640@1550	372.6@1550	88.3@1550	EGR ECM PTOX OC SCRC NH3OC DFI TC CAC
6135HFC09D	6135	392@2100	263.8@2100	84.7@2100	2520@1550	353.6@1550	83.8@1550	EGR ECM PTOX OC SCRC NH3OC DFI TC CAC
6135HFC09E	6135	392@2100	266.3@2100	85.5@2100	2520@1550	354.9@1550	84.1@1550	EGR ECM PTOX OC SCRC NH3OC DFI TC CAC
6135HFC09F	6135	373@2100	262@2100	80.9@2100	2397@1550	335@1550	79.4@1550	EGR ECM PTOX OC SCRC NH3OC DFI TC CAC
6135HFC09G	6135	373@2100	250.4@2100	80.4@2100	2397@1550	333.8@1550	79.1@1550	EGR ECM PTOX OC SCRC NH3OC DFI TC CAC
6135HFC09H	6135	336@2100	227.1@2100	72.9@2100	2160@1550	298.3@1550	70.7@1550	EGR ECM PTOX OC SCRC NH3OC DFI TC CAC
6135HFC09I	6135	336@2100	227.7@2100	73.1@2100	2160@1550	297.9@1550	70.6@1550	EGR ECM PTOX OC SCRC NH3OC DFI TC CAC
6135HFC09J	6135	317@2100	215.8@2100	69.3@2100	2037@1550	281.5@1550	66.7@1550	EGR ECM PTOX OC SCRC NH3OC DFI TC CAC
6135HFC09K	6135	317@2100	215.8@2100	69.3@2100	2036@1550	281.5@1550	66.7@1550	EGR ECM PTOX OC SCRC NH3OC DFI TC CAC
6135HFC09L	6135	309@2100	211.5@2100	67.9@2100	1986@1550	275.1@1550	65.2@1550	EGR ECM PTOX OC SCRC NH3OC DFI TC CAC
6135HFC09M	6135	309@2100	212.1@2100	68.1@2100	1985@1550	276.4@1550	65.5@1550	EGR ECM PTOX OC SCRC NH3OC DFI TC CAC
6135HFG09A	6135	473@1800	366.6@1800	100.9@1800				EGR ECM PTOX OC SCRC NH3OC DFI TC CAC
6135HFG09B	6135	411@1800	311.8@1800	85.8@1800				EGR ECM PTOX OC SCRC NH3OC DFI TC CAC
6135HFG09C	6135	356@1800	268.9@1800	74@1800				EGR ECM PTOX OC SCRC NH3OC DFI TC CAC
6135HH005	6135	460@2100	325.8@2100	104.6@2100	2750@1550	392.9@1550	93.1@1550	EGR ECM PTOX OC SCRC NH3OC DFI TC CAC
6135HN005	6135	460@2100	320.1@2100	102.8@2100	2750@1550	389@1550	92.2@1550	EGR ECM PTOX OC SCRC NH3OC DFI TC CAC
6135HPRNT2	6135	489@2100	337.6@2100	108.4@2100	2902@1550	416.5@1550	98.7@1550	EGR ECM PTOX OC SCRC NH3OC DFI TC CAC
6135HT003	6135	296@2000	205.8@2000	62.9@2000	2099@1500	290.2@1500	66.5@1500	EGR ECM PTOX OC SCRC NH3OC DFI TC CAC
6135HT004	6135	296@2000	205.8@2000	62.9@2000	2099@1500	290.2@1500	66.5@1500	EGR ECM PTOX OC SCRC NH3OC DFI TC CAC
** 6135HT006	6135	296@2000	205.8@2000	62.9@2000	2099@1500	290.2@1500	66.5@1500	EGR ECM PTOX OC SCRC NH3OC DFI TC CAC
6135HT007	6135	296@2000	205.8@2000	62.9@2000	2099@1500	290.2@1500	66.5@1500	EGR ECM PTOX OC SCRC NH3OC DFI TC CAC
* 6135HT008	6135	296@2000	205.8@2000	62.9@2000	2099@1500	290.2@1500	66.5@1500	EGR ECM PTOX OC SCRC NH3OC DFI TC CAC
6135HZ013	6135	460@2100	325.8@2100	104.6@2100	2750@1550	392.9@1550	93.1@1550	EGR ECM PTOX OC SCRC NH3OC DFI TC CAC
6135RW409	6135	460@2100	325.8@2100	104.6@2100	2750@1550	392.9@1550	93.1@1550	EGR ECM PTOX OC SCRC NH3OC DFI TC CAC

* New Ratings added for running change

** New Emergency vehicle ratings added for running change